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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,688	04/26/2005	Toshifumi Inoue	G110-075 US	8728
21706	7590	07/07/2006	EXAMINER	
NOTARO AND MICHALOS 100 DUTCH HILL ROAD SUITE 110 ORANGEBURG, NY 10962-2100			ZHU, JOHN X	
			ART UNIT	PAPER NUMBER
			2858	

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/532,688	INOUE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	John Zhu	2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 4/27/2006 and 6/2/2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/10/06, 4/20/06</u>  | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Response to communications filed on 4/27/2006 and 6/2/2006.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (hereinafter AAPA) in view of Taimisto et al. (6,922,579 B2).

With respect to claim 1, AAPA discloses a physical property measuring probe that measures a complex dielectric constant of a measured object to measure a physical property value of the object such as water content comprising an internal electrode (Fig. 9, element 111), an external electrode arranged coaxially (element 112) with the internal electrode, and an end surface (113).

AAPA does not disclose the probe comprising forming an end surface thereof obliquely to an axial direction of the internal electrode and an angle of the end surface with respect to the axial direction of the internal electrode is set so as to obtain a desired electric length.

Taimisto discloses a probe tip, formed obliquely (Fig. 9) to an axial direction of the internal electrode (element 22) at an angle (element 38) with respect to the axial

direction of the internal electrode set so as to obtain a desired electric length (Column 10, lines 59-62).

It is noted that although Taimisto is silent regarding a probe for measuring complex dielectric constant which keeps an appropriate sensitivity even if the probe is thin, this limitation is considered to be an intended use of the probe, claims directing to an apparatus must be distinguished from the prior art in terms of structure rather than function alone.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the oblique form as taught by Taimisto into the system of AAPA for the purpose of making sufficient and substantial contact with a target (Column 10, lines 48-51).

4. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Taimisto as applied to claim 1 above, and further in view of Yang (6,734,689 B1).

With respect to claims 2 and 3, AAPA and Taimisto disclose all aspects of the claim except for explicitly disclosing the probe is detachably attached to a flexible probe-attached cable provided in the physical property measuring apparatus through coupling means by a threaded structure.

Yang discloses a probe detachably attached to a coaxial cable (known to be flexible) via coupling means (Fig. 12, element 170) with the probe is attached to the coupling means by a threaded structure (element 102).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the probe coupling means as taught by Yang into the system of AAPA and Taimisto for the purpose of connecting the probe to the processing/control unit.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and Taimisto as applied to claim 1 above, and further in view of Campbell et al. (6,370,426 B1).

With respect to claim 4, AAPA and Taimisto disclose all aspects of the claim except for a temperature sensor being arranged in the vicinity of the end surface.

Campbell, in his invention of a moisture sensor, discloses a temperature sensor (Column 2, lines 48-50) enclosed at end of the probe housing.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the temperature sensor as taught by Campbell into the system of AAPA and Taimisto for the purpose of automatically compensating for the effects of temperature variations during the measurement process (Column 1, lines 50-53).

### ***Response to Arguments***

6. Applicant's arguments filed 4/27/2006 have been fully considered but they are not persuasive. Applicants traverse the rejection on the basis that there is no motivation to combine the references to arrive at the claimed invention (Page 5, paragraph 2).

7. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (Page 6 paragraph 3 -> Page 7 paragraph 1), it is noted that the motivation to combine the references is found in the prior art itself (see Taimisto, column 10, lines 48-65) and not from the applicant's disclosure. Applicant's Admitted Prior Art reference is used to show the conventional probe, while the Taimisto reference is used only to show that it is not uncommon to change the geometry of a sensor head to an oblique shape.

8. In response to applicant's argument that the references fail to recognize the forming the end surface of the measuring probe obliquely with respect to the axial direction of the internal conductor has the effect of increasing the cross-sectional area of the end surface which allows the diameter of the measuring probe to be reduced while maintaining the desired electrical length (Page 7, paragraph 1), the limitation is explicitly taught by the obviousness reasoning of the references. When the shape of the sensor is oblique shaped, the cross-sectional area of the end surface is inherently increased. Moreover, claims directed to an apparatus must be distinguishable from the prior art in terms of structure rather than function alone. As the examiner believes the prior art references in combination is capable of performing the functions (the shape allows the diameter of the measuring probe to be reduced while maintaining the desired electrical length) as disclosed, the burden of proof is shifted to the applicant.

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9. In response to applicant's argument that even if combinable, the references do not teach all the limitations of the claim (Page 7 paragraph 4 -> Page 8 paragraph 1), the examiner disagrees. As evident from Figs. 17 and 18 of Taimisto, we see clearly that the end surface of the probe lies on a plane perpendicular to the axial direction of the internal conductor, just as the applicant requires.

In response to applicant's argument that nothing in the in the cited references teach a measuring probe configured to measure the internal complex dielectric constant of an object while avoiding or minimizing the damage around the insertion zone (Page 7 paragraph 3), claims directed to an apparatus must be distinguishable from the prior art in terms of structure rather than function alone. As the examiner believes the prior art references in combination is capable of performing the functions (minimizing the damage around the insertion zone) as disclosed, the burden of proof is shifted to the applicant.

10. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., Taimisto's *catheter cannot penetrate any barrier and its only applications is for measuring surface characteristics* (Page 6, paragraph 2, lines 6-7) and *the cited references fail to teach, disclose or suggest a measuring probe that does not require the contact surface (or end surface) to be parallel to the outer surface of the measured object in order to measure its complex dielectric constant* (Page 9, lines 2-5)) are not recited in the rejected claim(s). Although the claims are interpreted in light of the

specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

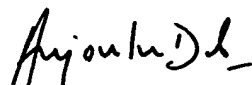
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Zhu whose telephone number is (571) 272-5920. The examiner can normally be reached on M-F, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



ANJAN DEB  
PRIMARY EXAMINER

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Examiner  
Art Unit 2858

